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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: E. Hebert *et al.*

Attorney Docket No: 20002.0067

Application No.: 09/625,544

Group Art Unit: 1732

Filed: July 25, 2000

Examiner: Edmund Lee

For: METHOD OF FORMING A MULTILAYER
GOLF BALL WITH A THIN THERMOSET
OUTER LAYER

SUPPLEMENTAL DECLARATION OF WILLIAM E. MORGAN
UNDER 37 CFR § 1.131

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

I, William E. Morgan, hereby declare that:

1. I am a citizen of the United States, and reside at 8 Meadow Circle, Barrington, RI 02806.
2. I am one of the inventors of the invention disclosed and claimed in the above-identified patent application.
3. I have been employed by ACUSHNET COMPANY (formerly doing business as Titleist and Foot-joy Worldwide), 333 Bridge Street, Fairhaven, MA 02719, the Assignee of record of the entire, right, title and interest in the invention.
4. I presently hold the position of Senior Vice President of Research and Development.
5. This declaration and the concurrently filed Mulgrew Declaration under 37 CFR § 1.132 are filed to show that prior to December 23, 1996, my co-inventors and I conceived the subject matter of the claimed invention and reduced it to practice by that date.
6. Attached hereto is a copy of an Invention Record (Exhibit A), a copy of inventor notes (Exhibit B), and product information sheets of DuPont products SURLYN® 7930,

SURLYN® 8140 and SURLYN® 8320 (Exhibit C). As explained below, these declarations and documents all demonstrate that we conceived and reduced to practice the claimed invention. The dates of conception have been deleted from these documents in accordance with standard practice, but all are prior to December 23, 1996.

7. With regard to the claimed invention, the only independent claim currently pending is claim 26. That claim recites the following features:

A method of forming a golf ball comprising the steps of

- (a) forming a golf ball core;
- (b) forming an inner cover layer around said golf ball core with a material having a first shore D hardness, wherein forming the inner cover layer comprises compression molding the inner cover material; and
- (c) casting an outer cover layer around said inner cover layer and golf ball core with a thermoset material having a second shore D hardness less than the first, wherein casting the outer cover layer comprises:
 - (i) placing the golf ball core in core holder;
 - (ii) gelling the thermoset material in the first mold half;
 - (iii) placing the golf ball core in to the gelling thermoset material in the first mold half,
 - (iv) disengaging the golf ball core from the core holder after a selected period of time
 - (v) placing the golf ball core, while still in said first mold half with the thermoset material against a second mold half having additional thermoset material and mating the two mold halves together; and
 - (vi) curing the thermoset material in the mated mold halves.

8. Element (a) of claim 26 concerns forming a golf ball core. One example of support for element (a) is found in the Invention Record (Exhibit A) at page 3, line 11 stating that a core is manufactured using conventional process techniques, and in the inventor's notes (Exhibit B) at page 1, which shows drawings of several golf balls having a solid or liquid core.

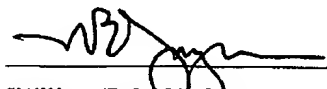
9. Element (b) of claim 26 concerns compression molding an inner cover with a material having a first material hardness around the golf ball core. One example of support for this element is found in the Invention Record (Exhibit A) at page 3, line 12, which describes forming an inner cover over the core either by compression or injection molding. In addition, the inventor notes (Exhibit B) at pages 3 and 4 discuss the use of SURLYN[®] 7930 and SURLYN[®] 8140 in the inner cover layer and the product information sheets for SURLYN[®] 7930 and SURLYN[®] 8140 (Exhibit C) identify their respective Shore D hardnesses of 68 and 65. Thus, the enclosed invention record, inventor notes and product information sheets show that we conceived and reduced to practice this element of the claimed invention.
10. Element (c) of claim 26 relates to casting a thermoset outer cover over the inner cover. In addition, the outer cover layer has a Shore D hardness of less than the inner cover layer. This feature is also supported by the enclosed documents. For example, support for element (c) is found in the invention record (Exhibit A) at page 3, lines 13-14, which describes casting a reactive liquid material around the inner cover. The invention record further explains on page 3, lines 15-17 that the "thin veneer" that forms the outer cover may be a "soft but abrasion resistant material." Further, the invention record at page 2, lines 15-16 explains that a "castable reactive material" is applied to make surface layers. The term "castable reactive material" is referred to in the specification (*See, e.g.*, in the specification at page 6, lines 21-26) as the material in forming thermoset material. Thus, the enclosed invention record, inventor notes and product information sheets show that we conceived and reduced to practice this element of the claimed invention.
11. The inventor notes further illustrate various soft-over-hard combinations of materials that also were being considered. For example, the inventor's notes (Exhibit B) at pages 2-4 discuss using a harder mantle (inner cover) and a softer outer layer. Example of a harder mantle and a softer outer layer is shown on pages 3-4, which discusses the use of SURLYN[®] 8320 in the outer cover layer, the use of SURLYN[®] 7930 or SURLYN[®] 8140 in the inner cover layer. Product information sheets for SURLYN[®] 8320, SURLYN[®] 7930 and SURLYN[®] 8140 (Exhibit C) identify their respective Shore D hardnesses of 36, 68 and 65.

12. The remainder of element (c) recites steps for carrying out the casting process as elements (i)-(vi) and is supported by U.S. Patent No. 5,733,428 (the '428 patent). Dean Snell, a co-inventor in this application also helped develop the casting process that ultimately resulted in the '428 patent. As indicated in the '428 patent, Dean Snell's development of the casting process predates December 23, 1996. Steps (i)-(vi) are described at, for example, column 3, line 43 to column 4, line 59, column 5, lines 52-62, column 5, line 66 to column 6, line 7, and column 6, lines 38-45 of the '428 patent. In addition, the concurrently-filed Declaration of John P. Mulgrew under 37 CFR §1.132 will further discuss and highlight support for these elements in the '428 patent.
13. I have reviewed the documents of Exhibits A, B and C. Although the dates have been blanked out, the dates concerning conception and reduction to practice are all prior to December 23, 1996. I hereby confirm that the work evidenced by the documents of Exhibits A, B and C and all the acts relied upon in this Declaration were carried out by me, by someone acting at my direction in the United States, or by a co-inventor prior to December 23, 1996.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully Submitted,

Date: 12/16/2003



William E. MORGAN